

**Coast Guard, DHS**

**§ 162.050-19**

Center, Engineering Division, 400 Seventh Street SW., Washington, DC 20590-0001.

[44 FR 53359, Sept. 13, 1979, as amended by CGD 82-063b, 48 FR 45114, Oct. 3, 1983; CGD 88-070, 53 FR 34537, Sept. 7, 1988; CGD 95-072, 60 FR 50467, Sept. 29, 1995; CGD 96-041, 61 FR 50734, Sept. 27, 1996; USCG-1999-5151, 64 FR 67185, Dec. 1, 1999; USCG 2001-10224, 66 FR 48621, Sept. 21, 2001]

**§ 162.050-17 Separator test rig.**

(a) This section contains requirements for test rigs used in approval testing of separators. A diagram of a typical test rig is shown in Figure 162.050-17(a).

(b) Each mixture pump on a test rig must—

(1) Be a centrifugal pump capable of operating at one thousand (1,000) revolutions per minute or more;

(2) Have a delivery capacity of at least one and one half (1.5) times the maximum throughput at which the separator being tested is designed to operate;

(3) Have a maximum delivery pressure that is equal to or greater than the maximum influent pressure at which the separator is designed to operate; and

(4) Have either bypass piping to its suction side or a throttle valve or orifice on its discharge side.

(c) The inlet piping of the test rig must be sized so that—

(1) Influent water flows at a Reynolds Number of at least ten thousand;

(2) The influent flow rate is between one and three meters per second; and

(3) Its length is at least twenty (20) times its inside diameter.

(d) Each sample point on a test rig must meet the design requirements described in Figure 162.050-17(e) and must be in a vertical portion of the test rig piping.

**§ 162.050-19 Monitor and bilge alarm test rig.**

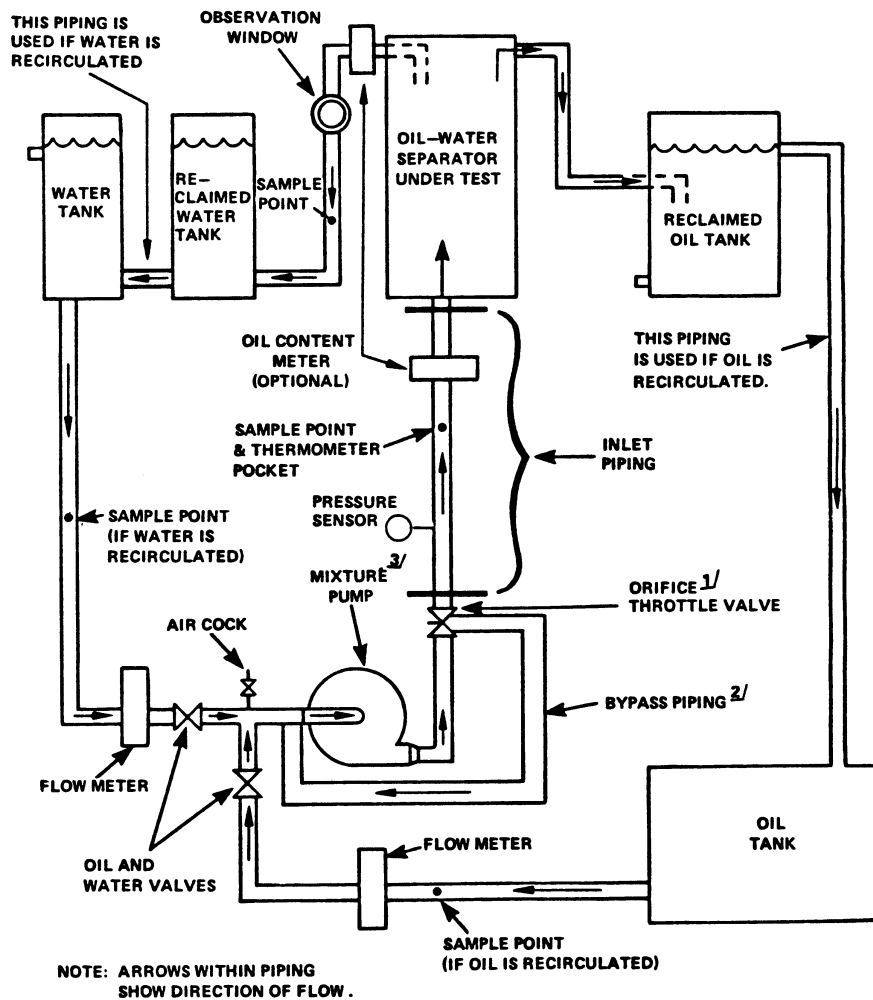
(a) This section contains requirements for test rigs used in approval testing of monitors and bilge alarms. A typical test rig is described in Figure 162.050-19. The mixture pipe shown in Figure 162.050-19 is the portion of test rig piping between the oil injection point and the monitor or bilge alarm piping.

(b) Each sample point on a test rig must be of the type described in Figure 162.050-17(e) and must be in a vertical portion of the test rig piping.

(c) Each test rig must have a centrifugal pump that is designed to operate at one thousand (1,000) revolutions per minute or more.

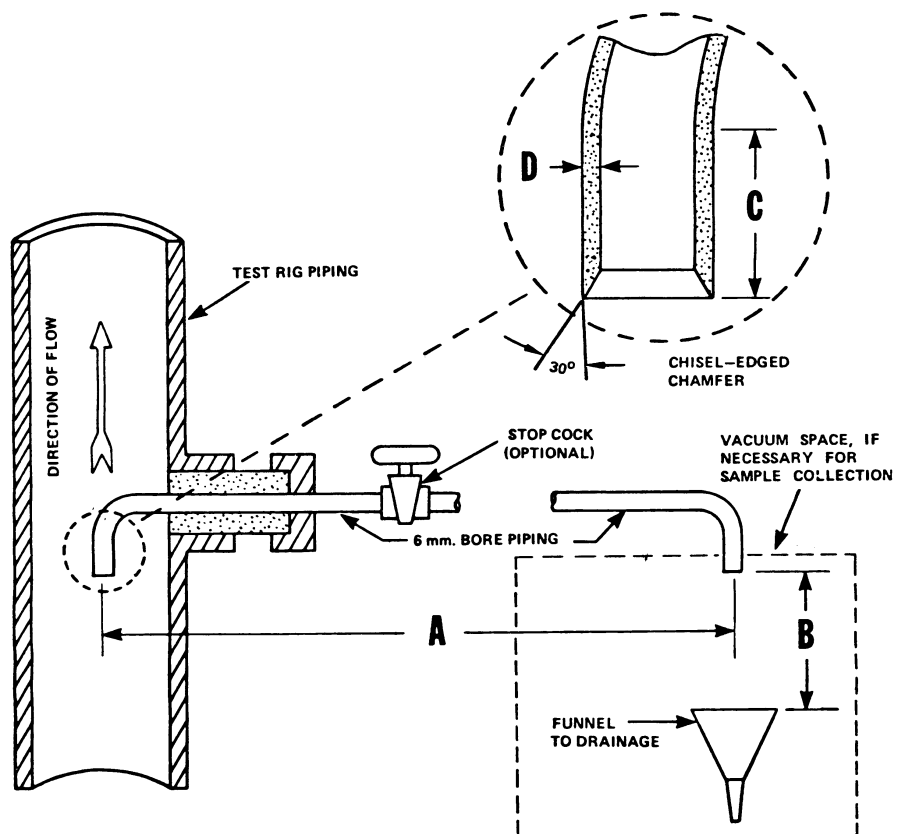
(d) The mixture pipe on a test rig must have a uniform inside diameter.

FIGURE 162.050-17(a) - SEPARATOR TEST RIG

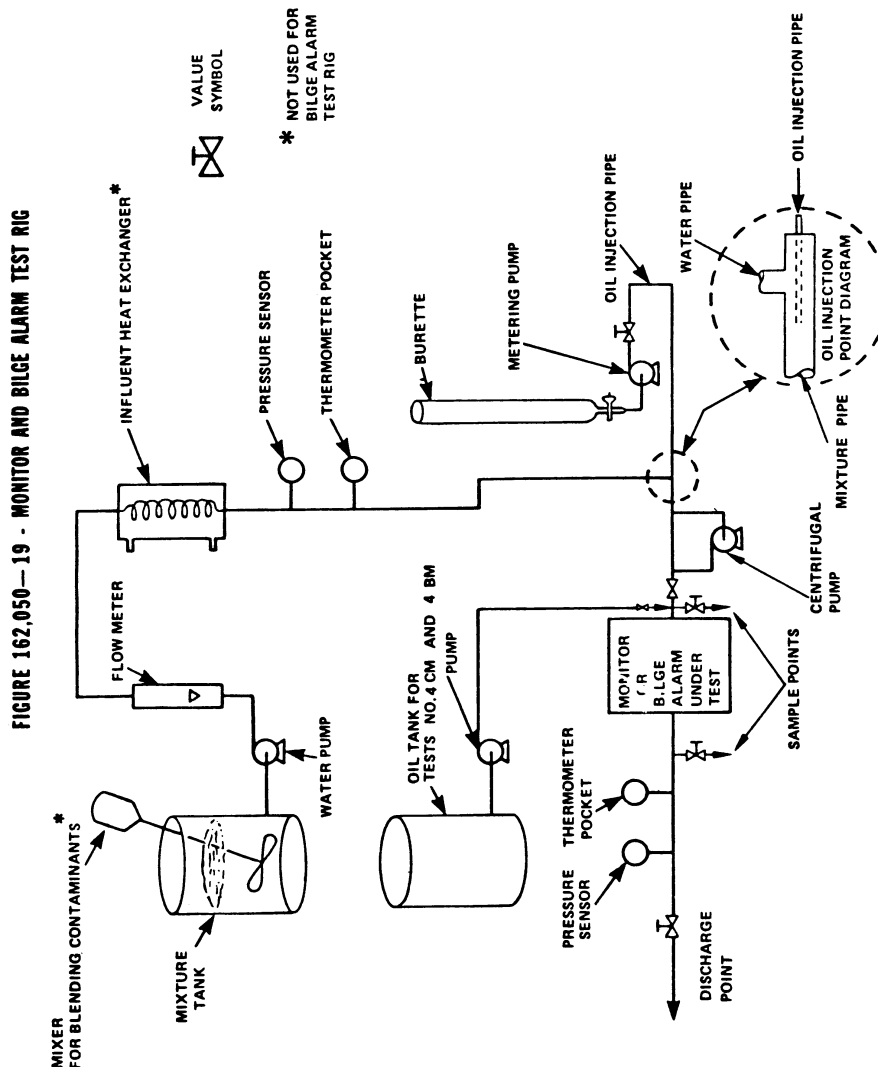


- 1/ NOT REQUIRED IF MIXTURE PUMP HAS BYPASS PIPING. SEE § 162.050-17(b) (4)
- 2/ NOT REQUIRED IF MIXTURE PUMP PIPING HAS ORIFICE. SEE § 162.050-17(b) (4)
- 3/ NOT REQUIRED IF SEPARATOR HAS SUPPLY PUMP. SEE § 162.050-17(b)

FIGURE 162,050-17(e) - SAMPLE POINT



- A** dimension A is not greater than 400 mm.
- B** height B is large enough to insert a sample bottle.
- C** distance C is a straight line of not less than 60 mm.
- D** width D is not greater than 2 mm.



**§ 162.050-21 Separator: Design specification.**

(a) A separator must be designed to operate in each plane that forms an angle of 22.5° with the plane of its normal operating position.

(b) The electrical components of a separator that are to be installed in an explosive atmosphere must be approved by an independent laboratory as com-

ponents that Underwriters Laboratories Standard 913 (dated April 8, 1976) defines as intrinsically safe for use in a Class I, Group D hazardous location.

(c) Each separator component that is a moving part must be designed so that its movement during operation of the separator does not cause formation of static electricity.